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ABSTRACT

The following assumptions motivated this monograph's analysis of commercial based reading programs: (1) basals represent the state of the art in reading instruction; (2) to offer suggestions for improvement of instruction, existing practices must be understood in detail; and (3) information about instruction contained in the literature at large or in publishers' descriptions of their programs is too global to promote understanding of practice beyond its surface features. The first section of the monograph covers problematic aspects of the earliest textual materials children encounter, including limited story vocabulary, specific characteristics of illustrations, divisions within a story, previous knowledge assumed by texts, and vocabulary knowledge and instruction before, during, and after reading. The second section deals with setting the direction for story lesson reading and applying schemata. The third section deals with after-reading questions and the effectiveness of sequential questioning based on plot events. Two studies--(1) an attempt to redesign a story lesson from a basal program and (2) a large vocabulary development program that investigated the relationship between vocabulary knowledge and reading comprehension--are briefly discussed in the fourth section. The monograph concludes that, in an attempt to be everything to everybody, basals sometimes set too many goals for individual lessons. Specific recommendations are listed for each of the problem areas identified throughout the monograph. (CRH)

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DEVELOPING COMPREHENSION: THE IMPACT OF THE DIRECTED READING LESSON

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U.S. DEPARTMENT OF EDUCATION
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DEVELOPING COMPREHENSION: THE IMPACT OF THE DIRECTED READING LESSON

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1984

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1 Developing Comprehension: The Impact of the Directed Reading Lesson

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Over the last five years I have spent an enormous amount of time poring over commercial reading materials. My initial work was an analysis of strategies used to teach decoding in eight beginning reading programs (Beck & McCaslin, 1978). A second endeavor was an examination of all aspects of instruction (except code breaking) that might affect comprehension. For this study, we selected two widely used basals as our information base (Beck, McKeown, McCaslin, & Burkes, 1979). Most recently I have examined the decoding and comprehension dimension of three additional programs. The course of my research on reading programs has encompassed a moderate to in-depth look at 13 basal programs. (See also Beck, 1981; Beck & Block, 1979; Beck, McCaslin, & McKeown, 1981; Beck & McKeown, 1981; Beck, McKeown, & McCaslin, 1981; Beck, McKeown, & McCaslin, in press.)

The following assumptions motivated my analysis of commercial programs: first, that basals represent the state of the art of reading instruction; second, that to offer suggestions for the improvement of instruction, researchers must understand existing practice at a detailed level; third, that information about instruction contained in the literature at large or in publishers' descriptions of their programs was too global to promote understanding of practice beyond its surface features.

With that brief overview of my work with reading programs and my reasons for pursuing that research, I now turn to the specific issues that are the focus of this chapter. The issues to be discussed were identified in a 1979 monograph. I should point out, however, that since publication of that monograph I have worked with several other programs and have

found the issues identified in the monograph relevant to the additional programs. Hence, the information base can be considered larger than two programs.

The reading education field in general and the programs we worked with in particular view comprehension instruction as occurring through the directed reading lesson (a series of events surrounding a textual selection from the children's reader), and the skills sequences (exercises aimed at promoting what are considered specific "skills," such as finding the main idea or following directions). Our work has focused on the directed reading lesson because it is the most traditional format for reading instruction and because it consumes a major portion of the instructional time devoted to reading. This assumption is made by looking at the amount of material present in the teacher's guides and by teachers' own reports about how they spend instructional time during reading periods.

The implicit objective of a directed reading lesson is to provide students with meaningful encounters with text so that they can build habits of comprehending. The typical lesson plan followed by teachers involves preparing students for an upcoming selection, having students read the selection, and finally, a discussion of the selection. From examination of these components in randomly selected lessons, we have identified seven issues that may play a role in student comprehension of the selections they read.

As a background to a discussion of these issues, the view of reading comprehension that underlies our work should be presented. Reading comprehension is not a unitary process. Rather, it is a complex process comprised of a number of interacting subprocesses. Nor is reading comprehension a single ability. Rather, it is highly dependent upon the reader's decoding accuracy, decoding fluency, vocabulary knowledge, previous background with the content in a given selection, and more. It would seem to follow, then, that attempts to improve comprehension are more likely to be productive if consideration is given to the components of the comprehension process *and* the abilities and knowledge required to perform these processes *and* the instructional procedures used to promote the abilities and teach the knowledge.

Also underlying our work are some notions about conditions that should facilitate the comprehension of a specific text. Here we acknowledge that new knowledge is more readily acquired by oral/aural language experiences until children are able to comprehend as efficiently by reading as they are by listening. Sticht, Beck, Hauke, Kleiman, and James (1974) suggest this occurs around the seventh or eighth grade. Hence, an oral language to written language sequence is inherent in our notions about comprehension instruction.

Now the discussion can proceed to the issues we identified. The first issue concerns the very earliest texts that children encounter.

PROBLEMATIC ASPECTS OF THE EARLIEST TEXTUAL MATERIALS

In virtually all reading programs, children are required to interact independently with pieces of connected text early in the process of learning to read. That is, they are assigned to read a story selection silently. To be sure, at the beginning, the texts read are just several sentences—but they are meant to convey meaning. It is during the time that each child interacts with the text independently that comprehension is constructed and the meaning of the text becomes represented in memory.

Since it is important that children be taught to develop a meaning-detection rather than a word-recognition orientation to the process of reading, it is necessary that they have all the elements needed for constructing meaning. Young readers can recognize so few words in print, however, that developers of beginning reading materials must of necessity work within a severely restricted vocabulary pool to create textual materials. Such vocabulary limitations imposed upon the earliest texts often preclude the most direct way of conveying meaning.

We found that these restrictions can lead to two types of problematic texts in beginning reading materials: (a) those for which the best words to describe a story concept are unavailable, and are replaced by roundabout language or by referring expressions, such as *here* and *this;* and (b) those that partially or totally omit information needed for story development. I will present an example of a text that has both roundabout language and omitted information.[1] This text attempts to communicate that a character is running so fast that he cannot stop in time to avoid falling into a pond. The children read:

> I can run fast.
> I see a pond.
> I must stop.
> I can't stop.
> The pond is bad luck.

Certainly these words do not represent the most direct way of communicating the intended message.

To compensate for the incomplete nature of the early texts, program developers often rely on accompanying pictures and information that is to be provided by the teacher or elicited from the children to carry the story content.

We selected a number of problematic texts and analyzed and evaluated the mechanisms (pictures and orally provided information) the programs used to compensate for incomplete texts. In some cases, the program

[1]The example was altered to make program attribution difficult.

mechanisms seemed successful for maintaining textual coherence. In other cases, the mechanisms did not seem adequate to make texts from which young readers would be likely to construct meaning.

Recommendations. Since the limited vocabulary of all early reading materials is inadequate to carry well-formed story lines or even well-formed messages, we make the recommendation that developers view these early texts as stories that are partly told to children. Some of the story would be read but the remaining elements necessary for textual coherence should be provided by the teacher through judicious use of questions and discussion during the reading lesson. The major concern here is that children be given *all* the elements necessary for constructing meaning. This is particularly important because reading at this early level is a new enterprise; children need to be made aware that the reading process is directed toward constructing meaning.

Picture Characteristics

There is some research that indicates that pictures whose content agrees with that of a printed text improve children's comprehension, but that pictures whose content is out of keeping with a printed text reduce comprehension (Peeck, 1974). In addition, some evidence suggests that stylistic factors of pictures (the way in which pictures are drawn) affect children's comprehension of a story (Poulsen, Kintsch, Kintsch, & Premack, 1979). Our work focused upon isolating specific aspects of pictures, under the two broad categories of *style* and *content* that may help or hinder comprehension.

First, let us consider style. In our review of the pictures included in the first two grades of several programs, we identified artistic stylization as a potentially problematic factor. In an effort to expose children to a variety of artistic styles, recent programs have included story illustrations that range from the very realistic to very abstract, and from very simple to highly elaborate.

It is our view that in some cases, abstract or elaborate stylization may increase the task demands for identifying an important picture element. For example, in one story, stylization takes the form of elaborate costumes worn by the story's animal characters. In the story, the words for some of the animals (e.g., boar, ox, dragon, rooster) are just being introduced into the children's reading vocabulary. It seems that children might gain clearer conceptions of any animals that may have been previously unknown if the pictures were less ornate. Indeed, Poulsen et al. (1979) have suggested that excessive elaborate detail distracts children. In

another story, a grasshopper is a major character. Here, the grasshopper is drawn in colorful Picasso-like style. When several adults were questioned about the picture, they could not identify the creature.

Another stylistic factor that may cause comprehension difficulties is change of perspective. Poulsen et al. found that children experience difficulty in understanding a story in which the pictures undergo "gross changes in perspective" (p. 398). We found a number of selections exhibiting what we considered to be radical shifts in perspective. For instance, a squirrel family is pictured smaller than a human family; on a subsequent page it is larger than the human family.

We suspect that difficulties in comprehension can also arise because of the *content* of the art, that is the elements of a story that are included in pictures or the overall view of a story that is depicted. One problem of picture content is that of a conflict between the picture and the text; we did indeed find some pictures that were truly in defiance of the basic tenets of the stories they accompanied.

Recommendations. It would seem that problematic picture situations could be reduced by giving more deliberate consideration to the role of pictures in early reading materials. Since pictures are often an integral part of the texts in early grades, efforts should be made to design pictures and the discussion around them so that they highlight, clarify, or complement text concepts. Certainly they should not confuse text concepts. Accordingly, attempts by developers of programs to include a range of artistic styles in their student materials should not take precedence over the goal of devising pictures that children understand easily.

Divisions Within a Story

In the primary grades children are usually assigned a portion of a text to read and then are stopped for a questioning/discussion period. In our review of teacher's manuals, we found instances where little attention had been given to the suitability of stopping points. We think that interrupting reading at an inappropriate point in a story episode might impede comprehension in much the same way that inappropriate paragraphing or punctuation can disrupt a more mature reader's comprehension. For the mature reader, when the discourse unexpectedly continues in the same vein as before the interruption, comprehension may suffer. The questioning/discussion period between the ending of one silent reading unit and the beginning of the next can be as long as several minutes. When this period interrupts in the middle of a story episode and lasts a long time, comprehension may suffer.

Recommendations. When narratives are to be divided into smaller portions for the purposes of questioning/discussion, it would seem wise to divide them in accordance with a plan that takes into account the sequences of events in the stories. We suggest the episodic structures that story grammars describe may provide some helpful constructs for identifying appropriate division points. Applying these constructs of episodic structure may emphasize the unified nature of the episodes and may thus help to promote story comprehension and recall.

Previous Knowledge Assumed by the Texts

I now discuss the relationship between previously acquired knowledge and the content of what is being read in the directed reading lesson. The importance of prior knowledge in comprehension is not a new discovery, but it recently has received a good deal of research attention. Prior knowledge is seen as providing the framework that helps the reader to assimilate new information. Anderson, Reynolds, Schallert, and Goetz (1976) note that "it may turn out that many problems in reading comprehension are traceable to deficits in knowledge rather than deficits in linguistic skills narrowly conceived" (p. 19).

In our examinations of selections from later primary-grade and intermediate-grade books, we became concerned with what could be mismatches between the previous knowledge important for understanding certain selections and the actual knowledge of the children who would be reading the selection. Consider, for example, a fifth-grade story that assumes knowledge of the antebellum South and an understanding of various facets of a slave's life. Comprehension of the story would be likely to suffer unless students have an appropriate background in which to fit such concepts as: Quaker, Underground Railroad, free states, overseer, trader, bloodhounds, runaway, patrol, and hummocks. Or consider a sixth-grade story that is heavily dependent upon nautical and sea-related knowledge; or a fourth-grade story that relies upon knowledge of the interdependence of animals in nature. Sophisticated knowledge structures are needed to comprehend these stories.

Setting the stage for comprehension through the prereading discussion appears rather perfunctory in some recent programs. We did not see within the teacher's guides any systematic preparation for those selections that are obviously more difficult than others in terms of the prerequisite knowledge required for understanding.

Recommendations. For texts that require considerable prior knowledge, the prereading discussion should certainly be given more serious consideration. Of course, wide individual differences among students us-

ing the program make it impossible for program developers to accommodate the multitude of variations in the backgrounds of those students. But it would appear that designing more suitable prereading activities, eliminating unnecessary terminology, and discarding certain selections would make selections more appropriate for general use. Program developers also have the obligation to continually remind teachers that children come to texts with varying degrees of relevant previous knowledge, and that their teaching must be adjusted accordingly. Reading programs can preclude some comprehension problems by providing activities that will help children acquire knowledge appropriate to a specific reading selection, for example, pre-reading-time oral discussions structured to develop knowledge frameworks relevant to the upcoming reading selection.

There has been about for a long time the notion of teaching reading through the content subjects. I support that notion, but I think we should become aware that we need to be teaching content in the reading class, as well.

Vocabulary

Very closely related to the background knowledge required for reading a text is vocabulary knowledge. In this section my emphasis is on single words rather than networks of ideas as was the case in the section on background knowledge.

By about the third grade, and certainly by the fourth grade, most of the selections in the newer reading programs are drawn from independently published materials, as compared to selections created by a publisher for inclusion in their series. The newer basals are virtual anthologies. Authors of the selections are professional writers using the best words available from the general vocabulary to communicate their ideas. Thus the kind of vocabulary control found in the older basals is not in evidence in current programs. The sophisticated vocabulary in the selections from the newer basals has both positive and negative potential for students reading the books. The negative potential is obvious—too many unfamiliar words will cause comprehension problems. The positive potential is also obvious—children can add words to their store of vocabulary.

Vocabulary development strategies created for each story lesson begin with the identification of a subset of words that developers believe may cause decoding or meaning difficulty. These words are listed in the teacher's manuals. By the third or fourth grade the programs assume competent decoding; most of the words noted in the teacher's manuals are of the meaning difficulty variety. These words become "target words" for vocabulary development activities. Traditionally, the development of

word meaning is attended to by instructional events that occur *prior to reading*, *during reading*, and *after reading*. I will summarize briefly the vocabulary instruction found at each of these points.

Prior to Reading

In the teacher's manuals of most intermediate reading programs, the developers provide specific instructional strategies for dealing with the meaning of target words. One of the programs we studied is very atypical in this regard, as no such strategies are detailed. There is simply a general suggestion that the teacher may want to preintroduce target words by writing them on the board and using them in strong oral context. The other programs we studied do reflect the traditional tendency to preteach at least a subset of the target words. In most cases of prereading instruction, target words are presented in sentences constructed to provide enough context to allow the students to infer the meaning of the target word. Besides this "context" method there are other traditional defining tasks and sentence generation tasks.

During Reading

In all the programs we examined, the main vehicle for vocabulary instruction is the reading selection itself. Children are expected to learn new words by inferring their meanings from the text. But the texts children are using have not been specifically constructed to provide the context necessary for conveying the meaning of target words. Rather, as I noted previously, the selections were written by professional writers whose concern is the communication of ideas rather than the specific demonstration of the meanings of particular words. Since the texts are not constructed specifically to establish the meanings of target words, it seems that the extent to which a context is likely to lead a reader to the meaning of a target word depends on chance rather than on design.

We conducted a small study to see how helpful these contexts were. Two stories were selected from the basal readers, and the target words were blacked out. Adults were then asked to read the stories and determine the target words, or close synonyms. The adult readers were able to identify an average of only 51% of the target words (or synonyms) from context. These target words were already in the vocabulary repertoires of our adult subjects; it would seem that children unfamiliar with the words would be much less likely to get meaning from the contexts. We have developed a categorization scheme that predicts which words will be identified, but a discussion of that is not germane to this paper (see Beck, McKeown, & McCaslin, in press). The point here is that natural contexts are not a reliable way of conveying meaning of potentially unfamiliar words.

Most programs include a glossary in the student reader. Children are expected to refer to the glossary for meanings of unfamiliar words encountered in their reading selections. Unquestionably, knowing how to use a glossary is a highly valuable skill. But there is evidence that expecting children to look up unfamiliar words as they are encountered during reading is questionable as a major strategy for teaching word meaning. Beyond third grade, children read selections independently; they are on their own to identify and look up unfamiliar words. Studies have shown that children have difficulty isolating words whose meanings they do not know (Anderson & Kulhavy, 1972; Harris & Sipay, 1975); many children may be unlikely to recognize the need to use a reference. Even when they identify an unknown word, it seems that only highly motivated students choose to interrupt their reading to check on its meaning. The teachers we have informally questioned report that they rarely see their students refer to the glossaries in their books.

The programs' reliance on story context and independent use of the glossary as methods of vocabulary development are at best appropriate only for the most motivated and competent readers. Children most in need of vocabulary development, the less skilled readers who are unlikely to add to their vocabulary from outside sources, receive little benefit from such indirect opportunities.

After Reading

In most programs, after-reading activities include a variety of "skills" development exercises. For vocabulary they consist mostly of independently completed exercises. In one of the programs we worked with, after-reading activities in the vocabulary strand are oriented toward reinforcing target words. For each story lesson, after-reading exercises are provided for the same set of target words found in the story. These activities provide *one* more encounter with the words. The words do not reappear on any regular basis in later reading selections. In another program (the same program that detailed no vocabulary preteaching strategies), after-reading vocabulary activities introduce an entirely new set of words. No effort is made to provide experience with the target words introduced in the stories.

The Best and Worst in Juxtaposition

Let us now for a moment consider the best case of vocabulary instruction that we found in the programs we studied. A new vocabulary word is presented in a sentence that elucidates the meaning of the new word; the word is encountered in the text selection, and the student looks it up in the glossary if she/he does not remember its meaning; the word appears a third time in an independently completed, after-reading activity. The

word does not appear again in subsequent selections or in vocabulary work. Remember, this is the *best* instance of new word experience that we encountered. It does not necessarily occur with any regularity.

At worst, a new word appears solely in a selection and the student skips over it because s/he either does not recognize it as an unknown word or does not want to be bothered with the disruptive glossary step.

Recommendations. Clearly, there is a big difference between these instances in the chances that a new word will be learned. However, we believe that even in the best case presented, it is likely that a new word has not had enough exposure for its meaning to be readily accessed even a short time after the instruction. Indeed, it is our assertion that it takes an extended series of fairly intense exposures before one "owns" a word, that is, before it can be quickly accessed and applied in appropriate contexts.

We believe this is particularly so since words introduced at this level are not of the type heard in everyday conversation, and thus not reliably reinforced. Therefore, we believe that neither the frequency conditions nor the instructional strategies in intermediate grades reading programs are effective for enhancing word knowledge.

Toward the end of this chapter, I discuss an instructional experiment that we have conducted that investigates the relationship between vocabulary and reading comprehension. There are implications for program developers inherent in this work.

SETTING THE DIRECTION FOR STORY LESSON READING

We next examined the traditional practice of setting a purpose for reading each selection. In closely examining the direction-setting activity through the intermediate grades in several programs, we found examples that might have a positive effect on the reader's comprehension of the text, and examples that might have a generally negative effect on reading behavior and, in turn, on comprehension. We agree with a statement made by Frase (1977) that "purpose in reading may lead a reader to stray from, as well as move toward, desirable learning outcomes" (p. 43). In the present discussion, the "desirable learning outcome" is, of course, good comprehension of the text.

First, I consider some examples of interfering direction-setting activities and discuss the reasons they may affect comprehension negatively. Interfering direction-setting activities err in three different ways. There are instances of direction-setting activities that could set the reader

off in the wrong direction; these misdirective activities seem likely to evoke inappropriate expectations, expectations that are not confirmed when the story is read.

Secondly, activities in which the direction setting seemed right but the scope too narrow. That is, the focus of the direction-setting activity was on only a small portion of the selection, usually found at either the beginning or ending of the story. The activity, therefore, excludes most of the story's content from its focus.

Thirdly, instances of direction-setting activities that in themselves give away information that should be determined by *reading*. While such "give away" activities can set the reader off in the right direction, they often take him or her through the whole journey, and make the reading of the story either unnecessary or anticlimactic.

Ideally, a positive direction-setting activity, by evoking a network of relevant associations, should prepare children to construct the meaning of text. It should not just elicit one or two bits of information. A direction-setting activity should provide a framework for the organization of events and concepts in a selection so that many aspects of the text become interrelated. To identify the key ingredients of direction-setting activities that would further these objectives, the notions of Anderson (1977) and others about *schemata* are helpful.

Schemata, which have variously been called *scripts*, *frames*, or *plans*, are already existing structures into which new concepts can be incorporated. Anderson describes a schema as a framework for ideas that can be thought of as containing "slots" to be filled.

Recommendations. Direction-setting activities should be formulated to conform to a schematic design. A schema promoting a network of ideas relevant to the content of a text might transform a direction-setting activity from an information-gathering directive into a plan that would help children identify, interrelate, and remember important story elements. The schematically oriented direction-setting activity differs from the information-gathering type in that it is more concerned *with setting children thinking in ways that will help them to understand the story* than specifying particular story elements to be located and remembered.

AFTER-READING QUESTIONS

I turn now to a consideration of questions asked in conjunction with story reading. Questioning students on what they have read is the most extensively used form of comprehension guidance. Conventional wisdom would indicate that questions are asked for two purposes. First, because

comprehension occurs inside the head and cannot be observed, teachers ask questions to determine whether students have understood a text. Answers can function as a measure of comprehension. Second, questions are seen as an aid to the development of comprehension that does not take place spontaneously during reading; that is, questions can function as post hoc probes for organizing and integrating story content. It is this latter function of questions with which we were concerned.

Since after-reading questioning is such a prevalent instructional practice, it has received much attention in the literature. The study of questions generally revolves around taxonomic notions of comprehension; there are several levels of comprehension from low to high, or simple to complex. Numerous studies have analyzed after-reading questions from basal readers or teacher-generated questions. The most often cited recommendation from such studies is that more attention be given to higher levels of comprehension, for example, questions that elicit inferences, evaluation, and appreciation.

It should be noted, however, that questions from higher levels of taxonomies, those considered to be "better" in the taxonomic view, do not necessarily require greater interaction with text information. For example, a question that asks children to identify with a story character—"How would you feel if you had been Goldilocks?"—would be labeled an appreciation question, the highest category on one taxonomy. Yet, a response to such a question would probably require less reliance on text information than a question that required a synthesis of story events. Such a question would be found on a lower level of the taxonomy.

Questions for promoting comprehension cannot be evaluated as "good" or "poor" unless we know, within the story framework, the role of the information tapped by the question. The importance of the information tapped by questions was emphasized by Kintsch and Vipond (1978) in discussing the usefulness of questions in measuring comprehension. We think this notion applies to promoting comprehension as well.

Through an extension of Kintsch and Vipond's notion, we are able to describe how we believe questions should function to promote comprehension of a story. Our view is quite simple. Questions should tap information that is central to story development. But it is not enough for questions solely to elicit discrete bits of important story content. Questions for a story should be generated to promote the development of a unified conception of the story, or a *map* of the story. Any coherent story map must interweave explicit and implicit story concepts. Here we register our concern with the tendency to structure questions according to taxonomic notions to the extent that question sequences begin by eliciting a "literal" recitation of a story without acknowledging that a basic understanding of what is read requires that inferences be drawn. Questioning

that attempts to develop a story map does recognize the importance of making certain inferences as well as recalling explicit story events.

Recommendations. To promote the development of a story map, information elicited by each question should build on what has preceded. There are two notions here. First, questions should proceed in a sequence that matches the progression of ideas or of events in the story. Second, questions should be framed to highlight the interrelationship of story ideas.

After a story map has been established, additional questions can then appropriately extend discussion to broader perspectives. Text extension questions could develop a story interpretation, explore a general theme or lesson embodied in the story, probe the use of literary conventions within the story, or act to extend the text by making story ideas a springboard for more general discussion. In our view, the extension of story ideas can enhance comprehension of a story *if* a map of the story has already been developed; story extension questioning, however, cannot substitute for the development of a story map.

FOLLOWING THROUGH ON THE ISSUES

We have identified some of the issues that might affect comprehension of a given text. Throughout the published versions of our work we cited existing theory and/or research and/or logical argument and/or our own teaching experiences as backdrops for our discussion of practices that appeared problematic. We view our work as issues generating, or as the plowwork needed before empirical studying of some of the issues.

We have now completed the first phase of two experimental studies about the issues we identified. The first study was an attempt to redesign a story lesson from a basal program and to assess comprehension of the redesigned version and the original version. The second study was a very large vocabulary development program that investigated the relationship between vocabulary knowledge and reading comprehension.

I am not able to report either study in any detail. For the vocabulary study I discuss the findings in several sentences. For the story study I present slightly more information, as it covers a number of the issues I have discussed in the present chapter.

The Vocabulary Study

To investigate the relationship between vocabulary knowledge and reading comprehension, we designed and implemented an extensive vocabulary program that taught approximately 100 words to fourth-graders over

a five-month period (Beck, McCaslin, & McKeown, 1980). Fourth graders from the same school who were matched on vocabulary and reading achievement served as controls. The two groups were compared on tasks using instructed and control words. Gains in specific word knowledge, in comprehension at the word, sentence, and discourse levels, and in general word knowledge and reading comprehension were made by the experimental group children. In contrast to some previous vocabulary training studies, our work indicated that a vocabulary training program can lead to gains in comprehension (Beck, Perfetti, & McKeown, 1982).

The Story Lesson Study

For the story work (Beck, Omanson, & McKeown, 1982), we selected a late-second-grade narrative about a raccoon who inadvertently frightens some bandits. When they flee, they drop a money bag which the raccoon picks up and eventually drops on a woman's doorstep while looking for food. The woman finds the money and attributes her good fortune to having made a wish on a star. A concept critical to understanding the story is that it revolves around a series of coincidences. The program developers have designed lesson elements for the story that do not promote the concept of coincidence. Rather, these elements promote a variety of concepts that are often distracting to this and other key aspects of the story.

The program lesson focuses on a discussion of raccoons as clever, playful animals. Our redesign of the lesson attempts to introduce the concept of coincidence and set up conditions that might help young readers understand story events as coincidental. These conditions include that bandits and raccoons share the physical characteristics of a masked face, that animals behave in a routine manner, that they focus on seeking food and avoiding danger, and that raccoons habitually pick up objects that are in their paths.

The pictures that accompany the original story are drawn in a fanciful style. They promote the idea that a fairy tale is happening rather than a plausible story. Although the pictures are quite engaging, the conflict of their style with the story is potentially problematic to comprehension. In the redesign of the lesson, the pictures were redrawn in a realistic style.

The questions provided by the reading program that are to be asked after each silent reading unit are uneven in quality. While some aim to elicit important story content, others tap information that is irrelevant to the story line. For example, one question asks where one might find out why raccoons swish their food in water before eating it. Since these questions appear between silent reading units of the story when children are in the process of constructing meaning from the story, they seem

potentially distracting. The redesigned questions systematically require the reader to establish connections between important story states and events in such a way that the plot is constructed.

We presented the story in its original form and in a form that included all redesigned components. We also attempted to explore the effects of the separate revisions. For these partial revision conditions, only one revision element was presented in the lesson while the other elements remained as in the original version. We used a narrative analysis developed by Omanson (in press) to derive a method for scoring children's recalls of the story. This analysis identifies the events and states of a story, and the relations that connect them, and on the basis of these relations classifies the content of narratives as Central or Noncentral. Central content describes the gist or plot of a narrative.

The basic data for the story task is the proportion of content units recalled. The two clearest results are: The total revision group recalled more central content at final recall than the original story group, and none of the partial revisions was sufficient to enhance recall. We then conducted a second study that used the raccoon story and the original and revised forms of an additional story. The study had a larger sample and an additional dependent measure, which was a set of forced-choice questions based on explicit and implied story information. The result was that children reading the revised stories recalled more from the stories and correctly answered more questions than children in the original story group. Thus we have reliable evidence that comprehension of a text can be enhanced through the careful crafting of the lesson elements surrounding the text.

I would like to say something more about the generalizability of enhanced comprehension of a specific text. The approach of redesigning a single reading lesson stems from a notion that daily encounters with reading lessons that consistently facilitate text comprehension may lead to the development of general comprehension fluency. Any attempt to test the validity of such a global notion must begin with a demonstration that comprehension of a single story can be enhanced by a careful structuring of the lesson elements surrounding that story. If this can be demonstrated with several individual stories, then the idea that the lesson elements surrounding a text can be "engineered" to enhance comprehension of specific materials will have some empirical basis. However, evidence of the enhancement of comprehension of specific texts is necessary, but not sufficient, to permit the claim that general comprehension will thus be affected. Yet it is intuitively compelling to think that reading experiences designed to maximize conditions for the construction of comprehension will better prepare children to comprehend subsequent texts. An attempt to measure the validity of the notion concerning general comprehension

would require large-scale instructional manipulation and longitudinal assessment. Such an undertaking is beyond the scope of the present program of research, but needs to be considered eventually. At present, we believe we have taken a useful step and believe that the issues we have raised can be used by developers now.

COMMENTS

If I have one major criticism of current basals, it could be summed up by remarking that the basals are attempting to be everything to everybody and thereby have conflicting goals. I would like to consider some of these.

It appears that the basals want to expose children to "good" art and variety in styles of illustration; yet, as I mentioned, some of that good art (and it is often very good) seems in conflict with a given text. Well, what is the primary goal, exposure to the art or enhancement of the text? Basals want to expose the children to variety in discourse types and topics, so some of them include many content selections in their readers. What is the goal, learning something about the temperature in the arctic and the desert in both farenheit and centigrade (an actual selection from a second-grade reader) or having a suitable selection on which to practice lower-order processes? Basals want to teach reference skills, so in the middle of a complicated narrative, the children are questioned about where they think the author got the information he needed to write the selection. What is the primary goal, understanding the narrative or learning that there are sources available for finding information? I could go on and on, but I do not want to belabor the point.

My conclusion is that in an attempt to be everything to everybody, the basals sometimes set for themselves too many goals for individual lessons. All the things I previously mentioned are good things in themselves and can be incorporated over time. The problem is that they cannot be done at once, or all the time, and that there are better places for some of them to be incorporated. For instance, certainly there are better places to discuss reference sources than in the middle of a complex narrative; certainly some texts are not harmed by abstract drawings; indeed, they might be enhanced; certainly a text about centrigrade and farenheit temperatures is better placed beyond second grade. But again the recommendation is for a more careful crafting of each story lesson.

Before concluding I should like to point out a conflict that can be derived from some of the things I have discussed and a resolution to that conflict. Throughout this chapter, I have implied an equating of the ease of comprehensibility with good reading instructional practice. However, I also discuss the need to challenge students in ways that add to their store

of knowledge and vocabulary, and extend their thinking about text ideas. The notions of easy material and the need for challenge would seem to leave us with conflicting recommendations. Perhaps what is needed is a two-track system of reading instruction: A daily reading assignment of an interesting but conceptually easy selection and also a regular presentation of conceptually more difficult selections grouped around the same knowledge domain. Since the conceptual load of the easier selections would not require a great deal of processing, they would allow children to build reading fluency. The stories with a greater conceptual load would help to build students' knowledge structures. Grouping texts around the same knowledge domain (e.g., nautical selections), would efficiently use the time spent preparing children to read about specific content. Each successive story in the strand could serve to reinforce the children's previous knowledge of the topic and then proceed to build on that knowledge base.

For the most part, I have dealt with conditions that we viewed as potentially problematic—and not those we found facilitative. My purpose in this is not to disparage commercial programs. Indeed, we found many conditions in each of the programs that we viewed as helpful in promoting comprehension. And I remind you that we did not quantify any of the problematic conditions. Rather, I have stressed problematic aspects in order to point out that they exist. The issue is not whether they exist 5% or 25% of the time. The issue is that they be remedied when they exist.

While certain instructional practices have been negatively assessed in this chapter, it must be noted that many children do learn to read under those very conditions. It must be recognized equally, however, that there are also children who have difficulty learning to read. For those children, reading instruction should be carried out in the most effective way possible. This does not mean the application of some instant instructional panacea, for none exists. Fluent reading ability develops slowly, over time. Improvements in instructional practice must be matched to this gradual evolution. A refinement of strategies, aimed at more careful development of each daily lesson, seems an appropriate course to follow.

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